



Commission on Government Forecasting and Accountability

PENSION IMPACT NOTE *103RD General Assembly*

REVISED

BILL NO: SB 3954

September 20, 2024

SPONSOR (S): Martwick

SYSTEM: General Assembly Retirement System (GARS), State Employees' Retirement System (SERS), State Universities Retirement System (SURS), Teachers' Retirement System (TRS) and Judges' Retirement System (JRS)

FISCAL IMPACT

An actuarial study has been performed on the major provisions of SB 3954 by the Commission's actuarial consulting firm, Segal. The table below compares the total State contributions to the Big 3 State systems (TRS, SURS, and SERS) through FY 2048 under the current funding law and the new 100% funding goal by FY 2048 set by this bill, which includes redirected bond payments as additional contributions. The total increase in the State contributions to the Big 3 systems through FY 2048 under the new funding goal would be \$39.962 billion.

Total State Contributions through FY 2048				
(\$ in Billions)				
	TRS	SERS	SURS	Total
Current Law	\$185.230	\$73.375	\$67.631	\$326.236
Target 100% Funded by FY48 & Redirected FY30-FY40 Bond Payments	\$209.860	\$81.260	\$75.078	\$366.198
Total State Contribution Increase thru FY 48	\$24.630	\$7.885	\$7.447	\$39.962

Under SB 3954, the total redirected bond payments of \$6.175 billion would be paid into the Pension Stabilization Fund from FY 2030 through FY 2040 for the purpose of making additional contributions to the 5 State systems. In the actuarial study, the Big 3 systems are estimated to be allocated a total of \$6.104 billion

(approximately 99% of the total redirected bond payments), as detailed in the table below.

Total Amount of the Redirected Bond Payment for FY 30-40 (\$ in Billions)			
TRS	SERS	SURS	Total
\$3.712	\$1.254	\$1.138	\$6.104

Please note that the bill mandates that **none** of the redirected bond payments should offset the required State contributions since these funds are in addition to the required State contributions, resulting in a funding level above 100% by FY 2048.

Funded Percentage as of the End of FY 2048				
	TRS	SERS	SURS	Total
Current Law	90.0%	90.0%	90.0%	90.0%
Target 100% Funded by FY48 & Redirected FY30-FY40 Bond Payments	103.9%	104.5%	104.6%	104.2%

It is also important to note that the impact of implementing the 20-year layered amortization is not included in the study. For the purposes of the study, all the actuarial assumptions are assumed to be met as expected in all future years, so there would be no actuarial liabilities to amortize. For the full actuarial study, please refer to Appendix I on page 6 of the Pension Impact Note.

SUBJECT MATTER: SB 3954 amends the five State System Articles of the Pension Code (TRS, SURS, SERS, JRS, and GARS). Some of the major changes in the bill include a new State funding plan with a goal of achieving 100% funding by FY 2048 and the implementation of a 20-year layered-amortization approach for any unfunded liabilities incurred after FY 2035. The bill redirects 50% of bond debt service from P.A. 93-0002 and P.A. 100-0023 towards the Pension Stabilization Fund for the purpose of making excess payments to the State Systems from FY 2030 - FY 2040. The bill also removes a provision requiring the Commission on Government Forecasting and Accountability (CGFA) to review and analyze the 90% funding ratio under P.A. 88-0593. Additional details regarding this legislation can be found in the Comment section below.

COMMENT:State Funding Plan for the Five State Retirement Systems (TRS, SURS, SERS, JRS, and GARS)Current Law

- The State shall contribute to the five State retirement systems a minimum required amount such that the required contribution is sufficient to bring the funded ratio of each system up to **90% by the end of FY 2045**.
- The annual required State contribution shall be calculated as a level percentage of payroll over the years remaining to and including FY 2045 and shall be determined under **the projected unit credit** actuarial cost method.
- **The 5-year asset and assumption “smoothing” methods** shall be used in order to mitigate the impact of any unexpected events or changes that may increase or decrease the State contribution.
 - With asset smoothing, implemented by P.A. 96-0043, which became effective on July 15, 2009, any gains or losses from investment fluctuations would be recognized in an equal annual amount over a period of 5 years.
 - Similarly, assumption smoothing, implemented by P.A. 100-0023, which became effective on July 6, 2017, serves to spread out the impact of any change in actuarial assumptions over the 5 year-period.
- Beginning in FY 2046, the minimum State contribution shall be the amount required to maintain the funded ratio of each system at 90%.

SB 3954

- SB 3954 would modify the current State funding plan for the five State retirement systems starting in FY 2026.
 - The FY 2025 State contribution would still be determined under the current funding plan.
- Major changes in the State funding plan would include:
 - Changing the funding goal to achieve 100% funding by FY 2048;
 - Starting in FY 2035, implementing a 20-year layered-amortization approach when determining the minimum State contribution; and
 - Using the entry age normal cost method beginning in FY 2049.
- Details on the modified State funding plan, categorized by three separate time periods, are discussed as follows:
 - For FY 2026 through FY 2034:
 - The minimum annual State contribution shall be determined by each system to be sufficient to achieve a **100%** funded ratio by the end of **FY 2048**. This contribution shall be calculated as a level percentage of payroll over the remaining years up to and including FY 2048, using the **projected unit credit** actuarial cost method.

- **The 5-year Asset smoothing and assumption smoothing methods** shall continue to be used when determining the required State contribution, consistent with current law.
- For FY 2035 through FY 2048:
 - Beginning in FY 2035, a layered-amortization approach for a period of 20 years would be used when determining the minimum annual State contribution.
 - The minimum annual State contribution shall be the amount estimated for the upcoming fiscal year **plus an actuarial “layering” component**, such that the funded ratio of each system equals 100% **20 years** after the fiscal year during which the contribution is made.
 - This adjustment shall be implemented in equal annual amounts over a 20-year period beginning in the fiscal year in which the current actuarial valuation is used to determine the required State contribution.
 - Thus, the 5-year asset smoothing and assumption smoothing methods shall sunset after FY 2034 and would be replaced with the 20-year layered-amortization approach, beginning in FY 2035.

Table 1 below provides a graphic illustration of how a “layered amortization” program functions. The chart is for illustration purposes only, and is not an actuarial projection. The chart assumes an unfunded liability is generated in each valuation year shown at left. If the unfunded liability does not increase in the valuation year shown, there would be no 20-year “amortization layer” attributable to that fiscal year.

Table 1

Valuation Date June 30 (Fiscal Year)	Fiscal Year State Contribution Determined	The Effect of the 20-Year Layered Amortization for Fiscal Year											
		2034	2035	2036	2037	2038	...	2054	2055	2056	2057	2058	
2033	2035		Amortization Layer Based on the FY 2033 Valuation										
2034	2036			Amortization Layer Based on the FY 2034 Valuation									
2035	2037				Amortization Layer Based on the FY 2035 Valuation								
2036	2038					Amortization Layer Based on the FY 2036 Valuation							
The layering process would continue each year in a similar fashion, extending beyond the determination of FY 2048 State contribution.													

- When making these determinations, the annual required State contribution shall be calculated as a level percentage of payroll for the remaining years up to and including FY 2048, using **the projected unit credit** actuarial cost method.

- Beginning in FY 2049:
 - **The entry age normal** actuarial cost method shall be used instead of the projected unit credit actuarial cost method.
 - The State contribution would **not** need to be calculated as a level percentage of payroll.
- Any additional State contributions made under the Budget Stabilization Act shall not be considered when determining the minimum State contribution under the modified State funding plan in SB 3954.

Additional Pension Stabilization Fund Payments

SB 3954 would create additional payments to the Pension Stabilization Fund, made under the auspices of the Office of the Comptroller, as follows:

- **FY 2030: an additional \$175 million would be paid into the Pension Stabilization Fund.**
- **FY 2031 through 2033: \$250 million would be paid into the Pension Stabilization Fund.** This payment is equivalent to one half of the principal payments concluding in FY 2030 made by the state to pay off the \$6 billion Income Tax Proceed Bonds issued under PA 100-0023.
- **FY 2034 through 2040: \$750 million would be paid to the Pension Stabilization Fund in addition to any payments made towards achieving the goal of funding every pension system at 100% by 2048.** These payments are approximately equivalent to one half of the principal payments made under the Income Tax Proceed Bonds ending in FY 2030 and one half of the last principal payment made under the Pension Obligation Bonds issued under PA 93-0002 ending in FY 2033.

SB 3954 states that none of the aforementioned payments made to the Pension Stabilization Fund shall be used in actuarial calculations of required contributions to achieve the 100% funding goal at the end of FY 2048, as mentioned previously.

Commission on Government Forecasting and Accountability Analysis of 90% Funding Ratio

Under current law, the Commission on Government Forecasting and Accountability (CGFA) is required to review and analyze the state's goal of 90% funding of actuarial liabilities by FY 2045, and make recommendations every five years as to the efficacy of this funding goal. CGFA's most recent analysis was published in November 2021. SB 3954 would eliminate this requirement.

JB:bs

LRB103 40703 RPS 73498 b

Appendix I

The full actuarial study for SB 3954 is presented on the following pages. Please note that SB 3954 and HB 5851 are identical:



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August 21, 2024

Via E-mail

Clayton Klenke
 Executive Director
 Commission on Government Forecasting and Accountability
 703 Stratton Office Bldg.
 Springfield, IL 62706

Re: Actuarial Impact Study – House Bill 5851 and SB 3954

Dear Clayton:

As requested, we analyzed the impact to projected costs for the Teachers’ Retirement System (TRS), the State Employees’ Retirement System (SERS), and the State Universities Retirement System (SURS) as outlined in House Bill 5851 (HB 5851). Due to limited data available, this analysis does not consider the impact of these changes for GARS or JRS.

The following table provides a high-level summary of the impact of the proposed changes outlined in HB 5851 on the funded percentage as of June 30, 2048 and the total State contribution amounts through fiscal year ending June 30, 2048 for each System. Additional details are included later in the letter.

(\$ in millions)	TRS	SERS	SURS	Total
Funded Percentage as of June 30, 2048				
Baseline	90.0%	90.0%	90.0%	90.0%
Target 100% Funded by 2048 Only	100.0%	100.0%	100.0%	100.0%
Target 100% Funded & Redirected FY30-FY40 Bond Payments	103.9%	104.5%	104.6%	104.2%
(Savings)/Costs on Total State Contributions through FYE 2048				
Baseline	-	-	-	-
Target 100% Funded by 2048 Only	\$24,630	\$7,885	\$7,447	\$39,962
Target 100% Funded & Redirected FY30-FY40 Bond Payments	\$24,630	\$7,885	\$7,447	\$39,962

This analysis is based on the provisions in effect as of the respective valuation dates for each of the Systems. The information contained in this document, as well as the accompanying exhibits, were prepared using actuarial assumptions and methods consistent with those employed in the actuarial valuations of the Systems as of June 30, 2023 (dated January 10, 2024 for TRS, December 22, 2023 for SERS, and November 7, 2023 for SURS), except as otherwise noted below.

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Proposed Changes

Under HB 5851, the Illinois Pension Code would be modified to include a new State funding plan with a goal of achieving 100% funding by FY 2048 and the implementation of a 20-year layered-amortization approach for any unfunded liabilities incurred after FY 2035. The bill redirects 50% of bond debt service from P.A. 93-0002 and P.A. 100-0023 towards the Pension Stabilization Fund for the purpose of making excess payments to the State Systems from FY 2030 – FY 2040.

For purposes of this analysis, all actuarial assumptions are assumed to materialize as expected in all future years. As a result, no new sources of unfunded liabilities are projected after FY 2035 and, therefore, this analysis does not attempt to include any impact due to the implementation of the 20-year layered amortization approach.

In addition, HB 5851 directs additional payments to the Pension Stabilization Fund (PSF), as described in the table below:

Fiscal Years Ending June 30	Total Additional Payments to PSF
2030	\$175M
2031 – 2033	\$250M ¹
2034 – 2040	\$750M ²

HB 5851 does not specify how the additional PSF funds will be allocated to each of the five affected systems (TRS, SERS, SURS, GARS, JRS). However, it is our understanding that the additional payments will be apportioned to each System on a pro rata basis. HB 5851 states that none of the additional payments made to the Pension Stabilization Fund should be considered in the actuarial calculations of required contributions to achieve the 100% funding goal by FY 2048. As such, the pro rata share of the additional payments, in addition to the modified statutory contribution requirements under HB 5851, will result in a funded percentage over 100% by 2048. However, analyses showing the inclusion of the additional payments use the same contribution stream as results that target 100% funding in 2048 without additional monies.

Actuarial Analysis

The analysis was based upon the census data and actuarial assumptions used in the June 30, 2023, actuarial valuations for TRS, SERS, and SURS. For purposes of this analysis, all changes are assumed to be effective as described in the 'Proposed Changes' section noted

¹ Equivalent to one half of the principal payments concluding in FY2030 made by the state to pay off the Income Tax Proceed Bonds issues under PA 100-0023

² Equivalent to one half of the principal payments concluding in FY2030 made by the state to pay off the Income Tax Proceed Bonds issues under PA 100-0023 and one half of the last principal payment made under the Pension Obligation Bonds issued under PA 93-0002 ending in FY2033

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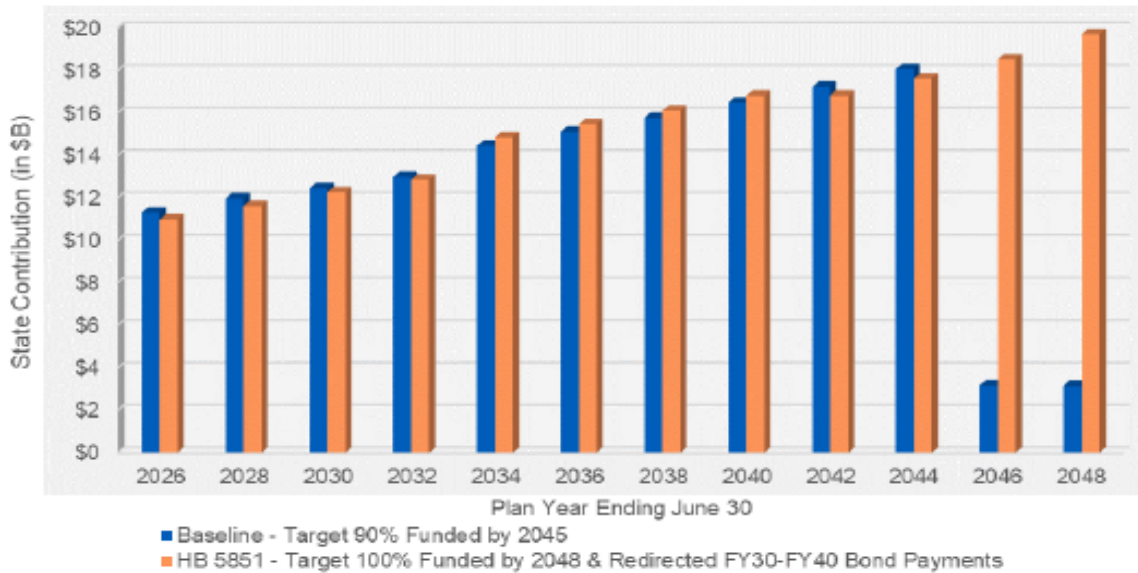
above. Upon attaining the 90% (baseline) or 100% (HB 5851) target funded percentage, projected contributions are determined to maintain the applicable target funded percentage for all future years, as needed, without consideration of the pro rata share of the PSF monies.

The pro rata shares of the additional payments to the PSF allocated for each System were based on the projected unfunded actuarial accrued liability (UAAL) for FY 2030 – FY 2040 using the baseline projection included in each System’s respective June 30, 2023, valuation report. As a result, the average allocation amounts of the additional payments to the PSF is as follows:

Fiscal Years	TRS	SERS	SURS	JRS	GARS
Ending June 30					
2030	\$102.5M	\$36.7M	\$33.6M	\$1.9M	\$0.3M
2031 – 2033	\$147.3M	\$52.1M	\$47.5M	\$2.7M	\$0.4M
2034 – 2040	\$452.5M	\$151.5M	\$137.5M	\$7.5M	\$1.0M

The following graphs and tables summarize the impact of the proposed changes on the System’s actuarial accrued liability (AAL) and projected State contribution amounts through FY2050. The attached exhibits show in greater detail the projected contributions, actuarial liabilities, actuarial assets, and funded position through 2048 reflecting the changes outlined above.

Projected Annual State Contributions (Every Other Year) – TRS, SERS, and SURS Combined



By extending the funding target year through 2048 (even with an increase to the ultimate target percentage from 90% to 100%), the pattern of State contributions change such that statutory contribution requirements decrease in the short-term, but, over the long-term, increase beyond what would have been required under a 2045 funding target year (and 90% target percentage).

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This is due to the statutory funding policy, which determines State contributions as a level percent of projected payroll through the funding target year.

Summary of Results for All Systems

(\$ in millions)	TRS	SERS	SURS	Total
Funded Percentage as of June 30, 2048				
Baseline ¹	90.0%	90.0%	90.0%	90.0%
Target 100% Funded by 2048 Only	100.0%	100.0%	100.0%	100.0%
Target 100% Funded & Redirected FY30-FY40 Bond Payments	103.9%	104.5%	104.6%	104.2%
State Contributions for FYE 2026				
Baseline	\$6,419	\$2,596	\$2,297	\$11,312
Target 100% Funded by 2048 Only	6,262	2,524	2,202	10,988
Target 100% Funded & Redirected FY30-FY40 Bond Payments	6,262	2,524	2,202	10,988
(Savings)/Costs on State Contribution for FYE 2026				
Baseline	-	-	-	-
Target 100% Funded by 2048 Only	(\$157)	(\$72)	(\$95)	(\$324)
Target 100% Funded & Redirected FY30-FY40 Bond Payments	(\$157)	(\$72)	(\$95)	(\$324)
Total State Contributions through FYE 2048				
Baseline	\$185,230	\$73,375	\$67,631	\$326,236
Target 100% Funded by 2048 Only	209,860	81,260	75,078	366,198
Target 100% Funded & Redirected FY30-FY40 Bond Payments	209,860	81,260	75,078	366,198
(Savings)/Costs on Total State Contributions through FYE 2048				
Baseline	-	-	-	-
Target 100% Funded by 2048 Only	\$24,630	\$7,885	\$7,447	\$39,962
Target 100% Funded & Redirected FY30-FY40 Bond Payments	\$24,630	\$7,885	\$7,447	\$39,962
Present Value of Total State Contributions through FYE 2048				
Baseline	\$88,420	\$35,834	\$33,412	\$157,666
Target 100% Funded by 2048 Only	92,461	37,072	34,540	164,073
Target 100% Funded & Redirected FY30-FY40 Bond Payments	92,461	37,072	34,540	164,073
(Savings)/Costs on Present Value of Total State Contributions through FYE 2048				
Baseline	-	-	-	-
Target 100% Funded by 2048 Only	\$4,041	\$1,238	\$1,128	\$6,407
Target 100% Funded & Redirected FY30-FY40 Bond Payments	\$4,041	\$1,238	\$1,128	\$6,407

As noted above, delaying the funded target date, even with an increase to the target percentage from 90% to 100%, lowers the State contribution requirements in the shorter-term, but ultimately results in higher costs to the Systems.

¹ Projected to achieve 90% funded status as of June 30, 2045.

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Additional Commentary

In addition to modifying the funding goal to achieve 100% funding by FY 2048, HB 5851 also includes a provision, starting in FY 2035, to implement a 20-year layered amortization approach when determining the minimum State contribution. The implementation approach as explained in HB 5851 is unclear. The proposed statutory language indicates that amortization layers "...shall include an adjustment for differences between the unfunded liability reported in the current actuarial valuation and the unfunded liability reported in the previous year's actuarial valuation...". Unfunded liability changes from one year to the next in ways that are expected and also unexpected; typically, changes in unfunded liability due to unexpected sources are used for the basis of establishing amortization layers in a given year. In addition, it is unclear how the amortization layers are intended to work with contribution amounts that are determined "...such that the total assets of the System equal 100% of the total actuarial liabilities of the System 20 years after the State fiscal year during which the contribution is made."

Comments about Projections

Projections, by their nature, are not a guarantee of future results. The modeled projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used.

The assumptions for this projection and analysis are based on those listed in the 2023 actuarial valuation report for TRS, SERS, and SURS (except as otherwise noted in this letter). As noted, the results of these projections are based on all assumptions materializing as expected, including the 7.00% investment return for TRS, the 6.75% investment return for SERS, and the 6.50% investment return for SURS. To the extent there is adverse experience, the projection scenarios would generate larger required State contributions.

Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment. The longer the projection period, the less predictable the projections become.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative, and client requirements. Deterministic cost projections are based on our proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility, and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuaries.

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Segal is not a law firm and we cannot offer legal advice. Any party seeking a legal opinion should consult with appropriate legal counsel.

This analysis was performed under my supervision. I am a Member of the American Academy of Actuary and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States of the American Academy of Actuaries to render the actuarial opinion contained herein.

Please let us know if you have any questions.

Sincerely,



Matthew A. Strom, FSA, MAAA, EA
Senior Vice President and Actuary

Exhibit A – TRS Projection (Baseline)

Funding Projections for the Teachers' Retirement System

Based on Laws in Effect on June 30, 2023 - Baseline

Actuarially Assumed Rate of Return: 7.00%

(\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll*	Total State Contribution	State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
2023					\$148,398.3	\$68,502.3	\$81,896.0	44.8%
2024	\$11,893.2	\$6,043.2	50.8%	\$1,092.2	152,470.8	70,119.6	82,351.2	46.0%
2025	12,542.5	6,203.6	49.5%	1,151.9	156,553.9	74,578.0	81,975.9	47.6%
2026	12,899.6	6,419.3	49.8%	1,184.7	160,640.8	77,348.0	83,292.8	48.1%
2027	13,253.3	6,578.9	49.6%	1,217.1	164,854.9	81,304.9	83,550.0	49.3%
2028	13,600.8	6,814.8	50.1%	1,249.1	169,103.7	85,530.2	83,573.4	50.6%
2029	13,924.2	6,966.4	50.0%	1,278.8	173,301.9	89,883.9	83,418.0	51.9%
2030	14,250.0	7,107.7	49.9%	1,308.7	177,435.1	94,358.7	83,076.4	53.2%
2031	14,575.1	7,251.6	49.8%	1,338.5	181,484.3	98,956.7	82,527.6	54.5%
2032	14,900.6	7,413.6	49.8%	1,368.4	185,428.4	103,696.6	81,731.8	55.9%
2033	15,221.2	7,590.0	49.9%	1,397.9	189,235.1	108,586.1	80,649.0	57.4%
2034	15,539.9	8,374.1	53.9%	1,427.1	192,881.7	114,258.9	78,622.8	59.2%
2035	15,854.8	8,543.8	53.9%	1,456.1	196,343.4	120,126.6	76,216.7	61.2%
2036	16,175.2	8,716.5	53.9%	1,485.5	199,603.2	126,206.8	73,396.4	63.2%
2037	16,502.3	8,892.7	53.9%	1,515.5	202,647.6	132,522.9	70,124.6	65.4%
2038	16,840.6	9,075.0	53.9%	1,546.6	205,451.9	139,095.5	66,356.4	67.7%
2039	17,183.6	9,259.9	53.9%	1,578.1	207,989.6	145,946.1	62,043.5	70.2%
2040	17,529.8	9,446.4	53.9%	1,609.9	210,234.8	153,097.3	57,137.5	72.8%
2041	17,894.0	9,642.7	53.9%	1,643.3	212,180.9	160,598.7	51,582.2	75.7%
2042	18,274.6	9,847.8	53.9%	1,678.3	213,827.9	168,506.3	45,321.6	78.8%
2043	18,676.9	10,064.6	53.9%	1,715.2	215,196.9	176,897.3	38,299.5	82.2%
2044	19,110.7	10,298.4	53.9%	1,755.1	216,326.5	185,873.2	30,453.3	85.9%
2045	19,569.6	10,545.6	53.9%	1,797.2	217,261.7	195,535.5	21,726.2	90.0%
2046	20,065.9	1,396.8	7.0%	1,842.8	218,074.6	196,267.1	21,807.5	90.0%
2047	20,601.4	1,373.7	6.7%	1,892.0	218,833.4	196,950.0	21,883.3	90.0%
2048	21,163.3	1,362.8	6.4%	1,943.6	219,598.0	197,638.2	21,959.8	90.0%
Total Through 2048		\$185,229.9		\$37,473.6				

* Does not include Federal Payroll

Exhibit B – SERS Projection (Baseline)

Funding Projections for the State Employees' Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023 - Baseline
 Actuarially Assumed Rate of Return: 6.75%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
2023					\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,223.0	2,552.6	48.9%	289.6	56,261.7	26,268.1	29,993.6	46.7%
2026	5,307.3	2,596.4	48.9%	292.4	57,276.8	26,651.9	30,625.0	46.5%
2027	5,391.3	2,634.7	48.9%	295.1	58,206.7	27,635.7	30,571.0	47.5%
2028	5,477.0	2,726.0	49.8%	297.8	59,052.0	28,668.1	30,383.9	48.5%
2029	5,569.8	2,750.5	49.4%	301.1	59,816.7	29,669.5	30,147.2	49.6%
2030	5,668.3	2,791.0	49.2%	304.8	60,504.5	30,661.2	29,843.3	50.7%
2031	5,772.3	2,835.5	49.1%	309.0	61,115.5	31,652.4	29,463.1	51.8%
2032	5,881.3	2,888.2	49.1%	313.2	61,648.2	32,655.4	28,992.7	53.0%
2033	5,992.3	2,947.6	49.2%	317.4	62,105.6	33,684.9	28,420.6	54.2%
2034	6,110.1	3,211.4	52.6%	321.9	62,489.8	34,960.5	27,529.3	55.9%
2035	6,231.9	3,275.4	52.6%	326.4	62,806.4	36,300.0	26,506.4	57.8%
2036	6,356.1	3,340.7	52.6%	330.9	63,055.5	37,714.4	25,341.2	59.8%
2037	6,482.8	3,407.3	52.6%	335.5	63,241.7	39,217.0	24,024.7	62.0%
2038	6,617.2	3,477.9	52.6%	340.6	63,374.7	40,830.0	22,544.6	64.4%
2039	6,758.7	3,552.3	52.6%	345.9	63,461.0	42,573.5	20,887.4	67.1%
2040	6,906.3	3,629.8	52.6%	351.5	63,506.5	44,469.2	19,037.4	70.0%
2041	7,059.9	3,710.6	52.6%	357.5	63,520.2	46,540.8	16,979.3	73.3%
2042	7,220.5	3,795.0	52.6%	363.8	63,512.9	48,813.2	14,699.7	76.9%
2043	7,388.0	3,883.0	52.6%	370.4	63,493.7	51,313.1	12,180.6	80.8%
2044	7,561.7	3,974.3	52.6%	377.2	63,469.6	54,066.7	9,402.9	85.2%
2045	7,741.0	4,068.6	52.6%	384.4	63,442.7	57,098.5	6,344.3	90.0%
2046	7,923.0	914.5	11.5%	391.6	63,414.6	57,073.1	6,341.5	90.0%
2047	8,109.0	914.2	11.3%	398.9	63,384.4	57,046.0	6,338.4	90.0%
2048	8,297.9	913.9	11.0%	406.2	63,351.9	57,016.7	6,335.2	90.0%
Total Through 2048		\$73,375.2		\$8,410.1				

Exhibit C – SURS Projection (Baseline)

Funding Projections for the State Universities Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023 - Baseline
 Actuarially Assumed Rate of Return: 6.50%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll*	Total State Contribution	State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
2023					\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,642.7	2,249.8	39.9%	338.1	53,083.3	24,918.7	28,164.6	48.9%
2026	5,760.0	2,296.6	39.9%	340.7	53,715.7	25,077.6	28,638.2	48.7%
2027	5,883.8	2,333.0	39.7%	344.0	54,280.0	25,654.4	28,625.6	47.3%
2028	6,029.3	2,430.5	40.3%	349.1	54,774.6	26,294.2	28,480.4	48.0%
2029	6,187.9	2,494.5	40.3%	355.2	55,194.5	26,940.1	28,254.5	48.8%
2030	6,349.8	2,555.8	40.2%	361.6	55,541.0	27,595.1	27,945.9	49.7%
2031	6,518.0	2,620.8	40.2%	368.2	55,810.7	28,264.8	27,545.9	50.6%
2032	6,691.6	2,694.0	40.3%	375.2	56,002.0	28,961.9	27,040.2	51.7%
2033	6,871.1	2,775.6	40.4%	382.4	56,131.9	29,717.3	26,414.6	52.9%
2034	7,058.0	2,878.6	40.8%	390.0	56,200.4	30,559.8	25,640.6	54.4%
2035	7,253.1	2,960.7	40.8%	398.0	56,217.6	31,487.4	24,730.2	56.0%
2036	7,450.5	3,043.7	40.9%	406.1	56,177.6	32,504.6	23,673.0	57.9%
2037	7,651.7	3,128.3	40.9%	414.3	56,089.5	33,631.7	22,457.8	60.0%
2038	7,858.8	3,215.4	40.9%	422.8	55,956.3	34,884.4	21,071.9	62.3%
2039	8,072.0	3,304.9	40.9%	431.6	55,793.7	36,290.9	19,502.8	65.0%
2040	8,294.0	3,398.1	41.0%	440.8	55,598.4	37,862.1	17,736.3	68.1%
2041	8,517.8	3,492.1	41.0%	450.1	55,389.9	39,629.2	15,760.8	71.5%
2042	8,749.7	3,589.3	41.0%	459.9	55,176.3	41,614.9	13,561.4	75.4%
2043	8,988.1	3,689.2	41.0%	470.1	54,978.5	43,855.3	11,123.2	79.8%
2044	9,233.5	3,791.9	41.1%	480.7	54,792.5	46,363.0	8,429.6	84.6%
2045	9,482.8	3,896.2	41.1%	491.4	54,635.9	49,172.3	5,463.6	90.0%
2046	9,734.6	859.2	8.8%	502.0	54,508.9	49,058.0	5,450.9	90.0%
2047	9,990.3	877.1	8.8%	512.6	54,428.2	48,996.0	5,432.2	90.0%
2048	10,808.8	869.6	8.0%	567.9	54,453.9	49,008.5	5,445.4	90.0%
Total Through 2048		\$67,630.9		\$10,376.3				

* Includes payroll from Self Managed Plan (SMP)

Exhibit 1A – TRS Projection (HB 5851 - Target 100% Funded by 2048)

Funding Projections for the Teachers' Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023 - 100% Funded Target by 2048
 Actuarially Assumed Rate of Return: 7.00%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll*	Total State Contribution	Compared to Exhibit A		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase In State Contribution	Present Value of (Reduction)/ Increase In State Contribution						
2023							\$148,398.3	\$66,502.3	\$81,896.0	44.8%
2024	\$11,893.2	\$6,043.2	\$0.0	\$0.0	50.8%	\$1,092.2	152,470.8	70,119.6	82,351.2	46.0%
2025	12,542.5	6,203.6	0.0	0.0	49.5%	1,151.9	156,553.9	74,578.0	81,975.9	47.6%
2026	12,899.6	6,261.7	(157.6)	(133.1)	48.5%	1,184.7	160,640.8	77,184.9	83,455.9	48.0%
2027	13,253.3	6,422.3	(156.6)	(123.6)	48.5%	1,217.1	164,854.9	80,968.3	83,886.6	49.1%
2028	13,600.8	6,646.0	(168.8)	(124.5)	48.9%	1,249.1	169,103.7	84,995.4	84,108.2	50.3%
2029	13,924.2	6,793.7	(172.7)	(119.0)	48.8%	1,278.8	173,301.9	89,132.9	84,169.0	51.4%
2030	14,250.0	6,931.0	(176.7)	(113.8)	48.6%	1,308.7	177,435.1	93,372.2	84,062.8	52.6%
2031	14,575.1	7,070.8	(180.8)	(108.8)	48.5%	1,338.5	181,484.3	97,714.1	83,770.2	53.8%
2032	14,900.6	7,228.8	(184.8)	(104.0)	48.5%	1,368.4	185,428.4	102,175.7	83,252.7	55.1%
2033	15,221.2	7,401.2	(188.8)	(99.3)	48.6%	1,397.9	189,235.1	106,763.4	82,471.8	56.4%
2034	15,539.9	8,192.4	(181.8)	(89.3)	52.7%	1,427.1	192,881.7	112,120.5	80,761.2	58.1%
2035	15,854.8	8,358.4	(185.4)	(85.2)	52.7%	1,456.1	196,343.4	117,646.6	78,696.8	59.9%
2036	16,175.2	8,527.3	(189.2)	(81.2)	52.7%	1,485.5	199,603.2	123,357.3	76,245.9	61.6%
2037	16,502.3	8,699.7	(193.0)	(77.4)	52.7%	1,515.5	202,647.6	129,274.3	73,373.3	63.8%
2038	16,840.6	8,878.0	(197.0)	(73.8)	52.7%	1,546.6	205,451.9	135,415.5	70,036.3	65.9%
2039	17,183.6	9,058.9	(201.0)	(70.4)	52.7%	1,578.1	207,989.6	141,800.6	66,189.0	68.2%
2040	17,529.8	9,241.4	(205.0)	(67.1)	52.7%	1,609.9	210,234.8	148,449.3	61,785.5	70.6%
2041	17,894.0	9,433.4	(209.3)	(64.1)	52.7%	1,643.3	212,180.9	155,408.8	56,772.1	73.2%
2042	18,274.6	9,634.1	(213.7)	(61.1)	52.7%	1,678.3	213,827.9	162,731.9	51,096.1	76.1%
2043	18,676.9	9,846.2	(218.4)	(58.4)	52.7%	1,715.2	215,196.9	170,492.6	44,704.3	79.2%
2044	19,110.7	10,074.8	(223.5)	(55.8)	52.7%	1,755.1	216,326.5	178,788.8	37,537.7	82.6%
2045	19,569.6	10,316.7	(228.9)	(53.4)	52.7%	1,797.2	217,261.7	187,718.3	29,543.4	86.4%
2046	20,065.9	10,578.4	9,181.6	2,003.5	52.7%	1,842.8	218,074.6	197,410.4	20,664.2	90.5%
2047	20,601.4	10,860.7	9,487.0	1,934.7	52.7%	1,892.0	218,833.4	207,996.1	10,837.2	95.0%
2048	21,163.3	11,156.9	9,794.1	1,866.7	52.7%	1,943.6	219,598.0	219,598.0	0.0	100.0%
Total		\$209,859.6	\$24,629.7	\$4,041.6		\$37,473.6				

* Does not include Federal Payroll

Exhibit 1B – SERS Projection (HB 5851 - Target 100% Funded by 2048)

Funding Projections for the State Employees' Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023 - 100% Funded Target by 2048
 Actuarially Assumed Rate of Return: 6.75%
 (\$ in millions)

Fiscal Ending 6/30	Annual Payroll	State Contribution	Compared to Exhibit B Present Value of		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,223.0	2,552.6	0.0	0.0	48.9%	289.6	56,261.7	26,268.1	29,993.6	46.7%
2026	5,307.3	2,523.9	(72.6)	(61.7)	47.6%	292.4	57,276.8	26,576.9	30,700.0	46.4%
2027	5,391.3	2,561.1	(73.6)	(58.6)	47.5%	295.1	58,206.7	27,479.6	30,727.1	47.2%
2028	5,477.0	2,646.1	(79.9)	(59.6)	48.3%	297.8	59,052.0	28,418.9	30,633.1	48.1%
2029	5,569.8	2,669.2	(81.3)	(56.8)	47.9%	301.1	59,816.7	29,319.4	30,497.3	49.0%
2030	5,668.3	2,708.3	(82.7)	(54.1)	47.8%	304.8	60,504.5	30,202.0	30,302.5	49.9%
2031	5,772.3	2,751.2	(84.3)	(51.6)	47.7%	309.0	61,115.5	31,075.2	30,040.3	50.8%
2032	5,881.3	2,802.4	(85.8)	(49.3)	47.6%	313.2	61,648.2	31,950.6	29,697.6	51.8%
2033	5,992.3	2,860.2	(87.5)	(47.0)	47.7%	317.4	62,105.6	32,842.1	29,263.5	52.9%
2034	6,110.1	3,124.9	(86.5)	(43.6)	51.1%	321.9	62,489.8	33,971.4	28,518.4	54.4%
2035	6,231.9	3,187.1	(88.3)	(41.6)	51.1%	326.4	62,806.4	35,153.0	27,653.5	56.0%
2036	6,356.1	3,250.7	(90.0)	(39.8)	51.1%	330.9	63,055.5	36,396.9	26,658.7	57.7%
2037	6,482.8	3,315.5	(91.8)	(38.0)	51.1%	335.5	63,241.7	37,715.8	25,525.9	59.6%
2038	6,617.2	3,384.2	(93.7)	(36.3)	51.1%	340.6	63,374.7	39,130.6	24,244.1	61.7%
2039	6,758.7	3,456.6	(95.7)	(34.8)	51.1%	345.9	63,461.0	40,660.5	22,800.5	64.1%
2040	6,906.3	3,532.0	(97.8)	(33.3)	51.1%	351.5	63,506.5	42,326.0	21,180.6	66.6%
2041	7,059.9	3,610.6	(100.0)	(31.9)	51.1%	357.5	63,520.2	44,149.7	19,370.5	69.5%
2042	7,220.5	3,692.7	(102.3)	(30.5)	51.1%	363.8	63,512.9	46,155.0	17,357.9	72.7%
2043	7,388.0	3,778.4	(104.6)	(29.3)	51.1%	370.4	63,493.7	48,367.4	15,126.3	76.2%
2044	7,561.7	3,867.2	(107.1)	(28.1)	51.1%	377.2	63,469.6	50,811.5	12,658.1	80.1%
2045	7,741.0	3,958.9	(109.6)	(26.9)	51.1%	384.4	63,442.7	53,510.3	9,932.5	84.3%
2046	7,923.0	4,052.0	3,135.3	721.1	51.1%	391.6	63,414.6	56,484.4	6,930.2	89.1%
2047	8,109.0	4,147.1	3,235.3	697.1	51.1%	398.9	63,384.4	59,757.8	3,626.6	94.3%
2048	8,297.9	4,243.7	3,329.8	672.1	51.1%	406.2	63,351.9	63,351.9	0.0	100.0%
Total Through 2048		\$81,260.4	\$7,885.3	\$1,237.5		\$8,410.1				

Exhibit 1C – SURS Projection (HB 5851 - Target 100% Funded by 2048)

Funding Projections for the State Universities Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023 - 100% Funded Target by 2048
 Actuarially Assumed Rate of Return: 0.50%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit C		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	Present Value of (Reduction)/ Increase in State Contribution						
2023							\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	\$0.0	\$0.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,642.7	2,249.8	0.0	0.0	39.9%	338.1	53,083.3	24,918.7	28,164.6	46.9%
2026	5,760.0	2,202.0	(94.6)	(80.8)	38.2%	340.7	53,715.7	24,980.0	28,735.7	46.5%
2027	5,883.8	2,239.6	(93.4)	(75.0)	38.1%	344.0	54,280.0	25,454.1	28,825.9	46.9%
2028	6,029.3	2,326.4	(104.1)	(78.4)	38.6%	349.1	54,774.6	25,973.3	28,801.3	47.4%
2029	6,187.9	2,387.6	(106.9)	(75.6)	38.6%	355.2	55,194.5	26,488.0	28,706.5	48.0%
2030	6,349.8	2,446.1	(109.7)	(72.8)	38.5%	361.6	55,541.0	27,000.5	28,540.5	48.6%
2031	6,518.0	2,508.2	(112.6)	(70.2)	38.5%	368.2	55,810.7	27,515.4	28,295.3	49.3%
2032	6,691.6	2,578.5	(115.6)	(67.7)	38.5%	375.2	56,002.0	28,044.5	27,957.6	50.1%
2033	6,871.1	2,656.9	(118.7)	(65.3)	38.7%	382.4	56,131.9	28,617.8	27,514.1	51.0%
2034	7,058.0	2,789.2	(89.5)	(46.2)	39.5%	390.0	56,200.4	29,296.5	26,904.0	52.1%
2035	7,253.1	2,868.7	(92.0)	(44.6)	39.6%	398.0	56,217.6	30,047.0	26,170.6	53.4%
2036	7,450.5	2,949.2	(94.5)	(43.0)	39.6%	406.1	56,177.6	30,873.1	25,304.5	55.0%
2037	7,651.7	3,031.3	(97.0)	(41.5)	39.6%	414.3	56,089.5	31,794.1	24,295.4	56.7%
2038	7,858.8	3,115.7	(99.6)	(40.0)	39.6%	422.8	55,956.3	32,824.5	23,131.8	58.7%
2039	8,072.0	3,202.6	(102.3)	(38.6)	39.7%	431.6	55,793.7	33,991.5	21,802.2	60.9%
2040	8,294.0	3,292.9	(105.2)	(37.2)	39.7%	440.8	55,598.4	35,304.7	20,293.7	63.5%
2041	8,517.8	3,384.1	(108.0)	(35.9)	39.7%	450.1	55,389.9	36,794.1	18,595.9	66.4%
2042	8,749.7	3,478.4	(110.9)	(34.6)	39.8%	459.9	55,176.3	38,481.1	16,695.2	69.7%
2043	8,988.1	3,575.2	(114.0)	(33.4)	39.8%	470.1	54,978.5	40,400.2	14,578.3	73.5%
2044	9,233.5	3,674.8	(117.1)	(32.2)	39.8%	480.7	54,792.5	42,562.5	12,230.1	77.7%
2045	9,482.8	3,776.0	(120.2)	(31.0)	39.8%	491.4	54,635.9	45,000.7	9,635.2	82.4%
2046	9,734.6	3,878.5	3,019.2	732.0	39.8%	502.0	54,508.9	47,731.0	6,777.8	87.6%
2047	9,990.3	3,982.7	3,105.6	707.0	39.9%	512.6	54,428.2	50,787.7	3,640.5	93.3%
2048	10,808.8	4,297.2	3,427.6	732.7	39.8%	567.9	54,453.9	54,453.9	0.0	100.0%
Total Through 2048		\$75,077.6	\$7,446.5	\$1,127.7		\$10,376.3				

* Includes payroll from Self Managed Plan (SMP)

Exhibit 2A – TRS Projection (HB 5851 - Target 100% Funded by 2048 & Redirect FY30-FY40 Bond Payments)

Funding Projections for the Teachers' Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023 - 100% Funded Target by 2048 & Redirect FY30-FY40 Bond Payments

Actuarially Assumed Rate of Return: 7.00%

(\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll*	Total State Contribution	Compared to Exhibit A		State Contribution as Percent of Payroll	TRS Portion of Redirected Bond Payments	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase In State Contribution	Present Value of (Reduction)/ Increase In State Contribution							
2023								\$148,398.3	\$66,502.3	\$81,896.0	44.8%
2024	\$11,893.2	\$6,043.2	\$0.0	\$0.0	50.8%	\$0.0	\$1,092.2	152,470.8	70,119.6	82,351.2	46.0%
2025	12,542.5	6,203.6	0.0	0.0	49.5%	0.0	1,151.9	156,553.9	74,578.0	81,975.9	47.6%
2026	12,899.6	6,261.7	(157.6)	(133.1)	48.5%	0.0	1,184.7	160,640.8	77,184.9	83,455.9	48.0%
2027	13,253.3	6,422.3	(156.6)	(123.6)	48.5%	0.0	1,217.1	164,854.9	80,968.3	83,886.6	49.1%
2028	13,600.8	6,646.0	(168.8)	(124.5)	48.9%	0.0	1,249.1	169,103.7	84,995.4	84,108.2	50.3%
2029	13,924.2	6,793.7	(172.7)	(119.0)	48.8%	0.0	1,278.8	173,301.9	89,132.9	84,169.0	51.4%
2030	14,250.0	6,931.0	(176.7)	(113.8)	48.6%	102.5	1,308.7	177,435.1	93,478.3	83,956.8	52.7%
2031	14,575.1	7,070.8	(180.8)	(108.8)	48.5%	146.8	1,338.5	181,484.3	97,979.5	83,504.8	54.0%
2032	14,900.6	7,228.8	(184.8)	(104.0)	48.5%	147.3	1,368.4	185,428.4	102,612.2	82,816.2	55.3%
2033	15,221.2	7,401.2	(188.8)	(99.3)	48.6%	147.9	1,397.9	189,235.1	107,383.4	81,851.7	56.7%
2034	15,539.9	8,192.4	(181.8)	(89.3)	52.7%	444.7	1,427.1	192,881.7	113,244.2	79,637.5	58.7%
2035	15,854.8	8,358.4	(185.4)	(85.2)	52.7%	445.9	1,456.1	196,343.4	119,310.5	77,032.8	60.8%
2036	16,175.2	8,527.3	(189.2)	(81.2)	52.7%	447.3	1,485.5	199,603.2	125,600.6	74,002.5	62.9%
2037	16,502.3	8,699.7	(193.0)	(77.4)	52.7%	472.4	1,515.5	202,647.6	132,163.6	70,484.0	65.2%
2038	16,840.6	8,878.0	(197.0)	(73.8)	52.7%	450.4	1,546.6	205,451.9	138,973.2	66,478.6	67.6%
2039	17,183.6	9,058.9	(201.0)	(70.4)	52.7%	452.3	1,578.1	207,989.6	146,075.5	61,914.1	70.2%
2040	17,529.8	9,241.4	(205.0)	(67.1)	52.7%	454.5	1,609.9	210,234.8	153,493.9	56,740.9	73.0%
2041	17,894.0	9,433.4	(209.3)	(64.1)	52.7%	0.0	1,643.3	212,180.9	160,806.5	51,374.4	75.8%
2042	18,274.6	9,634.1	(213.7)	(61.1)	52.7%	0.0	1,678.3	213,827.9	168,507.5	45,320.5	78.8%
2043	18,676.9	9,846.2	(218.4)	(58.4)	52.7%	0.0	1,715.2	215,196.9	176,672.5	38,524.4	82.1%
2044	19,110.7	10,074.8	(223.5)	(55.8)	52.7%	0.0	1,755.1	216,326.5	185,401.2	30,925.3	85.7%
2045	19,569.6	10,316.7	(228.9)	(53.4)	52.7%	0.0	1,797.2	217,261.7	194,793.6	22,468.1	89.7%
2046	20,065.9	10,578.4	9,181.6	2,003.5	52.7%	0.0	1,842.8	218,074.6	204,981.0	13,093.6	94.0%
2047	20,601.4	10,860.7	9,487.0	1,934.7	52.7%	0.0	1,892.0	218,833.4	216,096.7	2,736.7	98.7%
2048	21,163.3	11,156.9	9,794.1	1,866.7	52.7%	0.0	1,943.6	219,598.0	228,265.5	-8,667.6	103.9%
Total		\$209,859.6	\$24,629.7	\$4,041.6		\$3,712.0	\$37,473.6				

* Does not include Federal Payroll

Exhibit 2B – SERS Projection (HB 5851 - Target 100% Funded by 2048 & Redirect FY30-FY40 Bond Payments)

Funding Projections for the State Employees' Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023 - 100% Funded Target by 2048 & Redirect FY30-FY40 Bond Payments
Actuarially Assumed Rate of Return: 6.75%
(\$ in millions)

Fiscal Ending 6/30	Annual Payroll	State Contribution	Compared to Exhibit B		State Contribution as Percent of Payroll	SERS Portion of Redirected Bond Payments	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	Present Value of (Reduction)/ Increase in State Contribution							
2023								\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$0.0	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,223.0	2,552.6	0.0	0.0	48.9%	0.0	289.6	56,261.7	26,268.1	29,993.6	46.7%
2026	5,307.3	2,523.9	(72.6)	(61.7)	47.6%	0.0	292.4	57,276.8	26,576.9	30,700.0	46.4%
2027	5,391.3	2,561.1	(73.6)	(58.6)	47.5%	0.0	295.1	58,206.7	27,479.6	30,727.1	47.2%
2028	5,477.0	2,646.1	(79.9)	(59.6)	48.3%	0.0	297.8	59,052.0	28,418.9	30,633.1	48.1%
2029	5,569.8	2,669.2	(81.3)	(56.8)	47.9%	0.0	301.1	59,816.7	29,319.4	30,497.3	49.0%
2030	5,668.3	2,708.3	(82.7)	(54.1)	47.8%	36.7	304.8	60,504.5	30,239.9	30,264.6	50.0%
2031	5,772.3	2,751.2	(84.3)	(51.6)	47.7%	52.3	309.0	61,115.5	31,169.6	29,945.8	51.0%
2032	5,881.3	2,802.4	(85.8)	(49.3)	47.6%	52.1	313.2	61,648.2	32,105.2	29,542.9	52.1%
2033	5,992.3	2,860.2	(87.5)	(47.0)	47.7%	52.0	317.4	62,105.6	33,060.9	29,044.7	53.2%
2034	6,110.1	3,124.9	(86.5)	(43.6)	51.1%	155.3	321.9	62,489.8	34,365.5	28,124.3	55.0%
2035	6,231.9	3,187.1	(88.3)	(41.6)	51.1%	154.7	326.4	62,806.4	35,733.5	27,072.9	56.9%
2036	6,356.1	3,250.7	(90.0)	(39.8)	51.1%	154.1	330.9	63,055.5	37,175.8	25,879.7	59.0%
2037	6,482.8	3,315.5	(91.8)	(38.0)	51.1%	141.3	335.5	63,241.7	38,693.2	24,548.5	61.2%
2038	6,617.2	3,384.2	(93.7)	(36.3)	51.1%	152.6	340.6	63,374.7	40,331.7	23,042.9	63.6%
2039	6,758.7	3,456.6	(95.7)	(34.8)	51.1%	151.8	345.9	63,461.0	42,099.5	21,361.4	66.3%
2040	6,906.3	3,532.0	(97.8)	(33.3)	51.1%	150.9	351.5	63,506.5	44,018.0	19,488.5	69.3%
2041	7,059.9	3,610.6	(100.0)	(31.9)	51.1%	0.0	357.5	63,520.2	45,956.0	17,564.2	72.3%
2042	7,220.5	3,692.7	(102.3)	(30.5)	51.1%	0.0	363.8	63,512.9	48,083.2	15,429.7	75.7%
2043	7,388.0	3,778.4	(104.6)	(29.3)	51.1%	0.0	370.4	63,493.7	50,425.8	13,067.9	79.4%
2044	7,561.7	3,867.2	(107.1)	(28.1)	51.1%	0.0	377.2	63,469.6	53,008.8	10,460.8	83.5%
2045	7,741.0	3,958.9	(109.6)	(26.9)	51.1%	0.0	384.4	63,442.7	55,855.9	7,586.8	88.0%
2046	7,923.0	4,052.0	3,135.3	721.1	51.1%	0.0	391.6	63,414.6	58,988.4	4,426.2	93.0%
2047	8,109.0	4,147.1	3,235.3	697.1	51.1%	0.0	398.9	63,384.4	62,430.8	953.7	98.6%
2048	8,297.9	4,243.7	3,329.8	672.1	51.1%	0.0	406.2	63,351.9	66,205.3	-2,853.4	104.5%
Total Through 2048		\$81,260.4	\$7,885.3	\$1,237.5		\$1,253.8	\$8,410.1				

Exhibit 2C – SURS Projection (HB 5851 - Target 100% Funded by 2048 & Redirect FY30-FY40 Bond Payments)

Funding Projections for the State Universities Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023 - 100% Funded Target by 2048 & Redirected FY30-FY40 Bond Payments
Actuarially Assumed Rate of Return: 6.50%
(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit C		State Contribution as Percent of Payroll	SURS Portion of Redirected Bond Payments	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	Present Value of (Reduction)/ Increase in State Contribution							
2023								\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	\$0.0	\$0.0	40.6%	\$0.0	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,642.7	2,249.8	0.0	0.0	39.9%	0.0	338.1	53,083.3	24,918.7	28,164.6	46.9%
2026	5,760.0	2,202.0	(94.6)	(60.8)	38.2%	0.0	340.7	53,715.7	24,980.0	28,735.7	46.5%
2027	5,883.8	2,239.6	(93.4)	(75.0)	38.1%	0.0	344.0	54,280.0	25,454.1	28,825.9	46.9%
2028	6,029.3	2,326.4	(104.1)	(78.4)	38.6%	0.0	349.1	54,774.6	25,973.3	28,801.3	47.4%
2029	6,187.9	2,387.6	(106.9)	(75.6)	38.6%	0.0	355.2	55,194.5	26,488.0	28,706.5	48.0%
2030	6,349.8	2,446.1	(109.7)	(72.8)	38.5%	33.6	361.6	55,541.0	27,035.2	28,505.8	48.7%
2031	6,518.0	2,508.2	(112.6)	(70.2)	38.5%	47.8	368.2	55,810.7	27,601.7	28,209.0	49.5%
2032	6,691.6	2,578.5	(115.6)	(67.7)	38.5%	47.5	375.2	56,002.0	28,185.4	27,816.7	50.3%
2033	6,871.1	2,656.9	(118.7)	(65.3)	38.7%	47.1	382.4	56,131.9	28,816.5	27,315.4	51.3%
2034	7,058.0	2,789.2	(89.5)	(46.2)	39.5%	141.0	390.0	56,200.4	29,653.5	26,546.9	52.8%
2035	7,253.1	2,868.7	(92.0)	(44.6)	39.6%	140.5	398.0	56,217.6	30,572.2	25,645.3	54.4%
2036	7,450.5	2,949.2	(94.5)	(43.0)	39.6%	139.9	406.1	56,177.6	31,576.9	24,600.7	56.2%
2037	7,651.7	3,031.3	(97.0)	(41.5)	39.6%	128.3	414.3	56,089.5	32,676.0	23,413.5	58.3%
2038	7,858.8	3,115.7	(99.6)	(40.0)	39.6%	138.4	422.8	55,966.3	33,906.6	22,049.7	60.6%
2039	8,072.0	3,202.6	(102.3)	(38.6)	39.7%	137.5	431.6	55,793.7	35,285.8	20,507.9	63.2%
2040	8,294.0	3,292.9	(105.2)	(37.2)	39.7%	136.4	440.8	55,598.4	36,823.9	18,774.4	66.2%
2041	8,517.8	3,384.1	(108.0)	(35.9)	39.7%	0.0	450.1	55,389.9	38,412.1	16,977.9	69.3%
2042	8,749.7	3,478.4	(110.9)	(34.6)	39.8%	0.0	459.9	55,176.3	40,204.2	14,972.0	72.9%
2043	8,988.1	3,575.2	(114.0)	(33.4)	39.8%	0.0	470.1	54,978.5	42,235.4	12,743.1	76.8%
2044	9,233.5	3,674.8	(117.1)	(32.2)	39.8%	0.0	480.7	54,792.5	44,516.9	10,275.6	81.2%
2045	9,482.8	3,776.0	(120.2)	(31.0)	39.8%	0.0	491.4	54,635.9	47,082.2	7,553.7	86.2%
2046	9,734.6	3,878.5	3,019.2	732.0	39.8%	0.0	502.0	54,508.9	49,947.8	4,561.1	91.6%
2047	9,990.3	3,982.7	3,105.6	707.0	39.9%	0.0	512.6	54,428.2	53,148.6	1,279.6	97.6%
2048	10,808.8	4,297.2	3,427.6	732.7	39.8%	0.0	567.9	54,453.9	56,968.2	-2,514.3	104.6%
Total Through 2048		\$75,077.6	\$7,446.5	\$1,127.7		\$1,138.0	\$10,376.3				

* Includes payroll from Self Managed Plan (SMP)